

Bellwork: 5/2/13

Simplify each radical expression:

1) $\frac{5}{5-2\sqrt{5}} \cdot \frac{(5+2\sqrt{5})}{(5+2\sqrt{5})}$ 2) $\frac{6-\sqrt{2}}{1+\sqrt{3}} \cdot \frac{(1-\sqrt{3})}{(1-\sqrt{3})} =$

$25 + 10\sqrt{5} - 10\sqrt{5} - 4 \cdot 25$

$25 - 20 = 5$

$\frac{5(5+2\sqrt{5})}{5}$

$5+2\sqrt{5}$

$1 - \sqrt{3} + \sqrt{3} - \sqrt{9}$

$1 - 3 = -2$

$\frac{6 - 6\sqrt{3} - \sqrt{2} + \sqrt{6}}{-2}$

Algebra 2

Quiz: Simplifying Radicals

Name _____

Date _____ Period _____

Simplify each expression. Make sure all answers are in **SIMPLEST FORM!!!**

Put answer on line provided

1) $\sqrt[3]{128x^5y^4}$

2) $\sqrt[4]{64x^6y^{10}}$

$$3) \sqrt{4x^2y^3} \cdot \sqrt{8x^3y^6}$$

$$\sqrt{32x^5y^9}$$

$$\begin{matrix} 32 \\ 16 \end{matrix} \wedge 2$$

$$\textcircled{44}$$

$$4x^2y^4\sqrt{2xy}$$

$$4) \frac{\sqrt[3]{81x^{10}y^8}}{\sqrt[3]{3xy}}$$

$$5) (6+2\sqrt{75})+(-5-3\sqrt{108})$$

$$6+2\sqrt{75}-5-3\sqrt{108}$$

$$75$$

$$25 \wedge 3$$

$$\textcircled{55}$$

$$36 \wedge 3$$

$$\textcircled{66}$$

$$1-8\sqrt{3}$$

$$6+10\sqrt{3}-5-18\sqrt{3}$$

$$6) (4-6\sqrt{18})-(-3-7\sqrt{50})$$

7) $(4\sqrt{2}+5)(3-6\sqrt{2})$

8) $2\sqrt{6}(4\sqrt{3}-5\sqrt{2})$

9) $\frac{2}{4+\sqrt{2}}$

10) $\frac{3-\sqrt{3}}{2+\sqrt{5}} \cdot \frac{(2-\sqrt{5})}{(2-\sqrt{5})}$

DEN: $4 - 2\sqrt{5} + 2\sqrt{5} - \cancel{5}$
 $\quad \quad \quad (-1)$

NUM: $\frac{6 - 3\sqrt{5} - 2\sqrt{3} + \sqrt{15}}{-1}$

$-6 + 3\sqrt{5} + 2\sqrt{3} - \sqrt{15}$
